REPORT RESUMES

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AN EVALUATION OF THE OFF-FARM AGRICULTURAL OCCUPATIONS MATERIALS.

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DESCRIPTORS- VOCATIONAL AGRICULTURE TEACHERS, STATE SUPERVISORS, *OFF FARM AGRICULTURAL OCCUPATIONS, *INSTRUCTIONAL MATERIALS, CURRICULUM GUIDES, *VOCATIONAL AGRICULTURE, HIGH SCHOOLS, *INFORMATION DISSEMINATION, *ADOPTION (IDEAS), NATIONAL SURVEYS,

QUESTIONNAIRES WERE MAILED TO 50 STATE SUPERVISORS OF AGRICULTURAL EDUCATION AND 373 HIGH SCHOOL TEACHERS IDENTIFIED AS PURCHASERS OF CENTER-DEVELOPED AND -DISSEMINATED MATERIAL TO EVALUATE THE CONTENT OF COURSE OUTLINES AND INSTRUCTIONAL MATERIALS PREPARED FOR TEACHING OFF-FARM AGRICULTURAL OCCUPATIONS. COMPLETED QUESTIONNAIRES WERE RETURNED BY 42 OF THE 50 STATE SUPERVISORS AND 297 OF THE 373 TEACHERS. SPECIFIC OBJECTIVES OF THE STUDY WERE TO DETERMINE THE DISTRIBUTION OF MATERIALS, TO DETERMINE THE EXTENT TO WHICH THEY INFLUENCED LOCAL AND STATE PROGRAMS IN EACH OF THE OCCUPATIONAL AREAS, AND TO ASSESS THE EFFECTIVENESS OF THE MATERIALS USED IN THE CLASSROOM INCLUDING THE DEGREE OF ACCEPTANCE BY THE TEACHERS. SOME FINDINGS WERE--(1) VOCATIONAL AGRICULTURE TEACHERS PLACED 71.6 PERCENT OF ALL ORDERS FOR THE MATERIALS, (2) THE MOST FREQUENTLY PURCHASED MATERIALS WERE THE COURSE OUTLINES AND MODULES IN THE AGRICULTURAL SUPPLY, HORTICULTURE, AND AGRICULTURAL MACHINERY AREAS, (3) MOST VOCATIONAL AGRICULTURE TEACHERS WHO USED THE MATERIALS INDICATED THAT THEY WERE OF HIGH VALUE IN INITIATING AND DEVELOPING OFF-FARM AGRICULTURAL OCCUPATIONS PROGRAMS, AND (4) STATE SUPERVISORS OF AGRICULTURAL EDUCATION INDICATED THAT THE MATERIALS WERE USED TO A GREAT EXTENT IN PLANNING STATE PROGRAMS IN OFF-FARM AGRICULTURAL OCCUPATIONS. IT WAS CONCLUDED THAT THE MATERIALS WERE WELL DISTRIBUTED GEOGRAPHICALLY AMONG THE AGRICULTURE TEACHERS, FAVORABLY RECEIVED BY STATE SUPERVISORY PERSONNEL, AND GENERALLY WELL ACCEPTED BY THE TEACHERS INCLUDED IN THE SURVEY. IT WAS RECOMMENDED THAT AN EFFORT BE MADE BY STATE AND AREA SUPERVISORY PERSONNEL TO ACQUAINT MORE VOCATIONAL AGRICULTURE TEACHERS WITH THESE OFF-FARM AGRICULTURAL OCCUPATIONS MATERIALS. THE APPENDIXES CONTAIN COPIES OF THE SURVEY INSTRUMENTS AND TABLES OF RELATED DATA. (WB)

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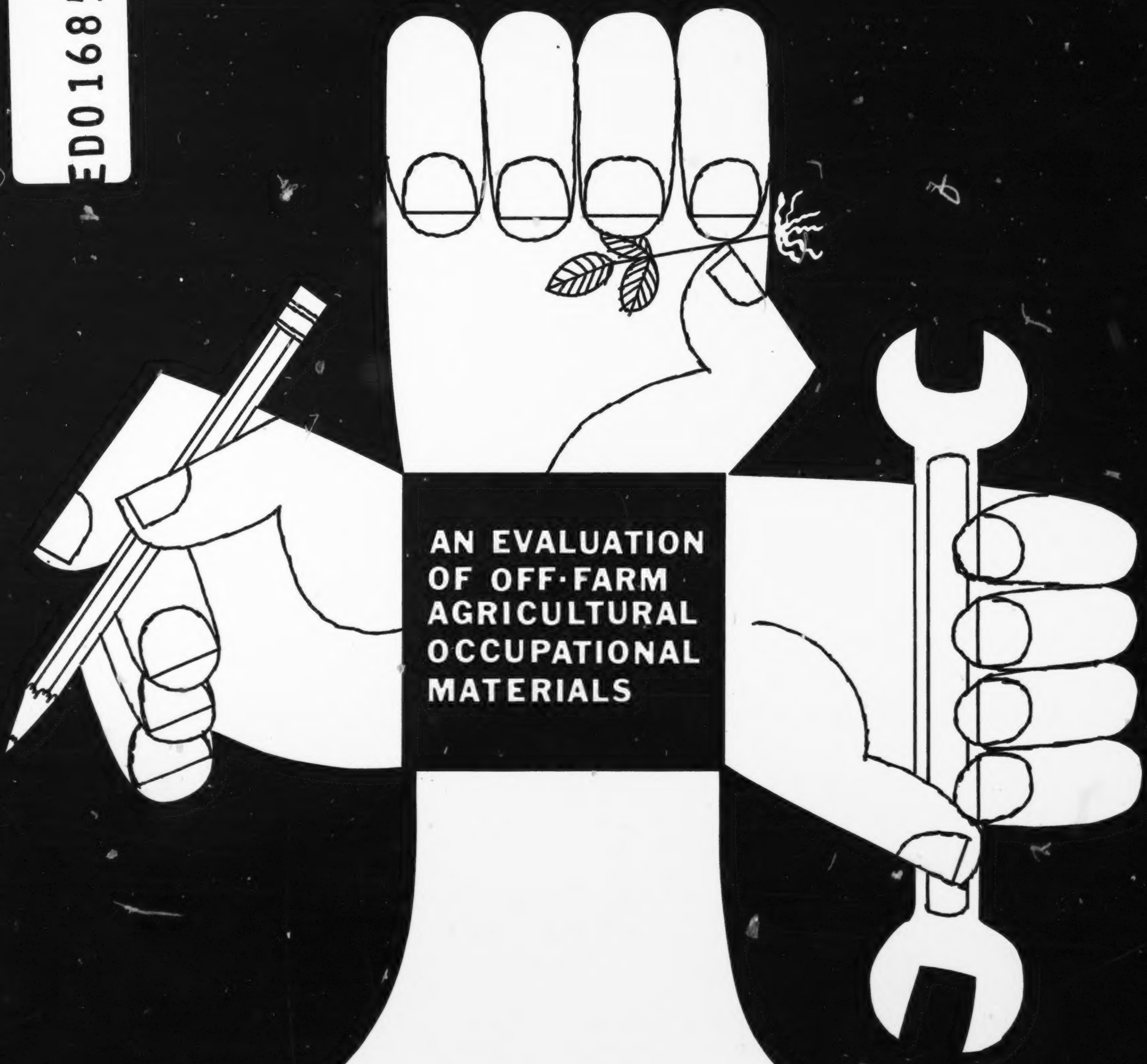

AN EVALUATION OF OFF-FARM AGRICULTURAL OCCUPATIONAL MATERIALS

HE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
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The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Adult and Vocational Research, U. S. Office of Education. It serves a catalytic role in establishing a consortium to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and in-service education program;

6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Research Information Center located in the U. S. Office of Education;

7. To provide educational opportunities for individuals contemplating foreign assignments and for leaders from other countries responsible for leadership in vocational and technical education.

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Research Series No. 21

AN EVALUATION OF THE OFF-FARM AGRICULTURAL OCCUPATIONS MATERIALS

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The Center for Research and Leadership Development
in Vocational and Technical Education

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October, 1967

PREFACE

This evaluation of off-farm agricultural occupations instructional materials is a further step in The Center's long-range interest in this area. Earlier activities included co-sponsoring with the Office of Education two national research coordination conferences in off-farm agricultural occupations studies and a project, "A Determination of Needed Adjustments and Extensions in the Curricular Patterns of Vocational Education in Agriculture," OE 5-85-009, designed to utilize the results of the several state agricultural occupations studies in developing needed instructional materials as a means of contributing to needed adjustments in vocational agriculture. This publication, "An Evaluation of the Off-Farm Agricultural Occupations Materials," is the latest effort of The Center to assist state and local vocational education leaders in planning and initiating programs to prepare youth and adults for employment and/or advancement in off-farm agricultural occupations.

Previous evaluation efforts consisted of a review and evaluation of the materials prior to publication by a wide range of knowledgeable individuals including vocational agriculture teachers, college and university subject matter specialists, supervisory and research personnel and agricultural business and industrial leaders. However, it was recognized that the materials were developmental in nature and only after evaluation by teachers, based on actual classroom experience, could a basis for further improvement and extension of the materials be established. This publication represents an effort to obtain an evaluation by teachers who had used the materials in the classroom.

This publication was prepared by Dr. James W. Hensel, Center Specialist in Agricultural Education, and Cecil H. Johnson, Jr., Research Associate at The Center. Assistance in preparation of the questionnaires was provided by Joel H. Magisos and Warren G. Noland, Research Associates at The Center. Special credit is also due the reviewers of the final draft for their helpful suggestions. The reviewers included: Dr. Edward Morrison, Center Research Coordinator, William Becker, Research Associate in Agricultural Education, James Utzinger, Extension Horticulturalist, Ohio State University and Dr. Harlan Ridenour, Instructional Materials Specialist, Department of Agricultural Education, Ohio State University.

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Education

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AN EVALUATION OF THE OFF-FARM AGRICULTURAL OCCUPATIONS MATERIALS

SUMMARY OF THE STUDY

Purpose and Objectives

The purpose of this project was to systematically evaluate the content of the course outlines and instructional materials which were developed and disseminated as a result of Project OE-5-85-009, "A Determination of Needed Adjustments and Extensions in the Curricular Patterns of Vocational Education."

The specific objectives were:

1. To determine the distribution of the materials developed by The Center;
2. To determine the extent to which the materials developed by The Center have influenced local and state programs in each of the occupational areas;
3. To assess the effectiveness of the materials as they were utilized in the classroom and their degree of acceptance by teachers at the local level.

Method and Procedures

In February, 1965, The Center for Vocational and Technical Education was awarded a grant by the Bureau of Adult and Vocational Research to assist states in undertaking studies of off-farm occupations training needs. The primary emphasis of Center effort was in synthesizing studies, developing needed instructional and program materials, and conducting national and regional conferences on their use. Complimentary copies of the materials were given to leaders in vocational education and interested teachers purchased, at cost, copies of the materials. The national task force approach to the development and dissemination of the instructional materials was a unique feature of the original project and there existed a need to evaluate these procedures and materials.

Three steps were followed in securing the data analyzed in this study. First, purchase orders on file at The Center for Vocational and Technical Education were examined to establish a listing of individuals who purchased or received complimentary copies of the materials. Major purchaser groups and geographical distribution were also determined from these records.

Secondly, a questionnaire, designed to determine the extent to which materials developed by The Center have influenced local and state programs in each of the occupational areas, was mailed in March, 1967, to each head state supervisor of agricultural education. State supervisors from 42 of the 50 states responded to the questionnaire, giving an 84 percent return.

Thirdly, an additional questionnaire was designed to secure an evaluation of the content and effectiveness of the material, the degree of acceptance of the materials by teachers, and insights into the effectiveness of the procedures used by The Center to disseminate the materials. This questionnaire was mailed to 373 teachers identified from Center records as purchasers of the materials through December 31, 1966. Two hundred and ninety-seven teachers (79.6%) responded to the questionnaire. Each respondent was classified according to the use made of the purchased materials. Teachers who purchased the materials were divided into two groups: (a) those who had used the materials in the classroom; and (b) those who had not used the materials in the classroom. All teachers, regardless of classification, were asked to provide information such as the key factors which influenced them to initiate off-farm agricultural occupations programs, the source from which they first became aware of the development of The Center publications, school enrollment, and the source of school enrollment (urban or rural). Teachers who had used the materials were requested to evaluate the content and effectiveness of the materials and those who had not used the materials were requested to indicate the reason or reasons which brought about this decision.

Results

Orders for the off-farm agricultural occupations materials were received from 47 states, the Virgin Islands, Puerto Rico, Washington, D. C., and Canada. Vocational agriculture teachers made the largest number of orders for the materials (71.6 percent of all orders). The most frequently purchased materials were the course outlines and modules in the areas of Agricultural Supply, Horticulture, and Agricultural Machinery.

State supervisors of agricultural education indicated that the materials developed by The Center were used to a great extent in planning state programs in the area of off-farm agricultural occupations. Three of the publications (Agricultural Machinery Service Occupations, Agricultural Supply-Sales and Service, and Policy and Administrative Decisions in Introducing Vocational and Technical Education in Off-Farm Occupations) were used to a greater extent than others.

A total of 373 high school teachers were identified as purchasers of the off-farm agricultural occupations materials through December 31, 1966. Two hundred and ninety-seven (79.6%) individuals completed and returned the questionnaire. One hundred and nine (36.7%) of these respondents indicated that they had actually used the material in the classroom.

In general, most vocational agriculture teachers who used the materials in the classroom indicated that the Center-developed materials were of high value in initiating and developing off-farm agricultural occupations programs. The course outlines in Agricultural Supply, Agricultural Machinery, and Horticulture received the highest rating by the teachers.

A majority of the teachers were suing the materials as the task force which developed them intended that they be used. The materials were generally supplemented with other materials or selected modules were used as a reference in preparing lesson plans. Only a small number of teachers used the modules as a complete lesson plan.

The major reason teachers gave for not using the materials was that they lacked enough time to adapt the materials to local programs. Twenty-one teachers indicated that they had decided not to offer an off-farm agricultural occupations course and thus did not use the materials.

The Agricultural Supply course outline and modules were generally used with eleventh and twelfth grade students of average ability as was intended when the materials were developed. The Horticultural course outline and modules were also generally used with eleventh and twelfth grade students of average ability. However, these materials were originally designed to be used with low ability or disadvantaged high school students. The Agricultural Machinery course outline and modules were intended to be used at the post high school level but most teachers reported satisfaction using these materials with eleventh and twelfth grade students.

The teachers rated the materials as appropriate in design, content, and usefulness, with the exception of suggested time allotments. The improvement most often suggested was that the materials could be made more useful to teachers by developing individual study guides, assignment sheets, and unit exams to supplemement the original materials so that the materials could be adapted to varying conditions with a minimum of teacher effort.

State supervisors indicated that the National and Regional seminars conducted by Center personnel were an effective means of providing state leaders with new information. Twenty-eight of the forty-two state supervisors responding to the questionnaire indicated that they had attended either the national or a regional seminar. One hundred percent of those who attended indicated that the seminars were effective in providing state leaders with new information.

Agriculture teachers indicated that their major source of information concerning the development of the off-farm agricultural occupations materials was the state or district supervisor of agricultural education or the teacher educator who had attended either the national or regional seminar conducted by The Center. Approximately 70 percent of the individuals named by teachers as the major source of information concerning the Center materials had attended one of these seminars.

I

INTRODUCTION

The implementation of the provisions of the Vocational Education Act of 1963 rapidly increased the number of schools providing training in off-farm agricultural occupations. Programs are being developed for several levels of preparation by local schools, area schools, and community colleges. In an attempt to assist states in undertaking studies of off-farm agricultural occupations training needs, The Center for Vocational and Technical Education was given a grant (OE-5-85-009) by the Bureau of Adult and Vocational Research to synthesize studies, develop needed instructional and program materials, and conduct training conferences on their use.

The controlling purpose of this effort was to assist states in accelerating the development of instructional programs in off-farm agriculture. The objectives of the program were:

1. To identify the major occupations which require competency in agriculture;
2. To determine the agricultural competencies needed by workers in these occupations;
3. To cluster the major agricultural occupations which require similar competencies;
4. To develop and refine the curricular guides and supporting materials which are most needed and feasible for the major clusters of agricultural occupations;
5. To examine the summary data for other implications in redirecting vocational agriculture (e.g., programs for disadvantaged youth, needed adjustments in administrative and supervisory procedures);
6. To train key state leaders in the use of the curricular guides and supporting materials.

A task force of thirty people from sixteen states, including personnel with a wide range of backgrounds and responsibilities in agricultural education, vocational education, agricultural technology, and agricultural industry, assembled to accomplish the objectives of the project. Several project advisory meetings were held to secure needed counsel from diverse but relevant groups and to help the task force maximize the potential benefits and uses of these materials.

A series of publications was produced and made available to leaders in vocational education as a direct result of this project. A complete list of this series follows.

1. Policy and Administrative Decisions in Introducing Vocational and Technical Education in Agriculture for Off-Farm Occupations
2. Vocational and Technical Education in Agriculture for Off-Farm Occupations
3. Summary of Research Findings in Off-Farm Agricultural Occupations
4. Planning and Conducting Cooperative Occupational Experience for Off-Farm Agriculture
5. Occupational Guidance for Off-Farm Agriculture
6. Horticulture - Service Occupations (course outline and twelve modules)
7. Agricultural Supply - Sales and Service Occupations (course outline and twelve modules)
8. Agricultural Machinery - Service Occupations (course outline and sixteen modules)
9. Agricultural Chemicals Technology (course outline and nine modules)

In developing these instructional materials, prime consideration was given to the data revealed by the studies of agricultural business and employee training needs conducted in several states. Current and projected employment opportunities dictated the area in which instructional materials were developed. In addition, these studies identified those occupations which required knowledge and skill in agriculture. They also contributed to the development of the publication series through the identification of specific competencies needed by individuals for entry and persistence in agricultural occupations.

Members of the task force were aided in the development of these publications through personal visitations to outstanding existing off-farm agricultural occupations programs. Frequent consultations with trade association educational committees and agricultural industry leaders concerned with personnel development were helpful in further "keying" these materials to employment needs. Existing materials were carefully reviewed and evaluated in terms of their utility in the preparation of these works and, when suitable, were recommended as a part of these publications.

A national meeting on off-farm agricultural occupations was held in Columbus, Ohio, in May of 1965 to begin dissemination of the materials developed. One hundred and sixty participants, representing forty-nine states and Puerto Rico, attended the Columbus meeting. The conference was developed primarily for teacher educators and state supervisory personnel in agricultural education. Representatives from agricultural business and industry, state colleges and universities, the U.S. Office of Education, area vocational schools, community colleges, saate employment services, and state departments of public instruction attended this conference.

The primary purposes of the conference were:

1. To present to personnel from the respective states an outline for developing new programs in off-farm agricultural occupations.

2. To show the nationwide need for such programs.

3. To present the preliminary materials pertaining to development of such programs as well as illustrative curricular materials already developed by project personnel.

4. To plan five area meetings which would focus on the development of local pilot programs.

The area meetings planned at the national conference were held during the May to June, 1965, period in Chicago, Illinois, New York, New York, Denver, Colorado, Pullman, Washington, and Atlanta, Georgia. While the National Conference focused attention on responsibilities and activities of state staff personnel in the respective states, the area meetings focused on the responsibilities and activities in which local school administrative officers, local boards, vocational coordinators, vocational teachers, and lay personnel could engage in to determine the needs for initiating such programs at the local level. The role of state staffs in initiating pilot programs was also included.

A total of 332 persons, excluding task force personnel, attended area meetings. Thirty percent of these persons were local teachers, and fifty percent of those attending were state staff personnel, who, by and large, would be responsible for providing guidance for these programs in their respective states. Representatives from agricultural industries, other vocational services, and educational institutions in the different areas attended these meetings.

Following the last area meeting, the task force devoted their energies to completing the curricular and program development materials. Copies of all publications were mailed to head state supervisors and head teacher educators in agricultural education throughout the United States. Vocational agriculture teachers, vocational educators, subject matter specialists, agricultural businessmen, and others who reviewed the materials for accuracy and appropriateness of content also received copies of the publications.

In addition, interested persons purchased, at cost, copies of the materials developed by the task force.

II

THE PROBLEM

The national task force approach to the development and dissemination of instructional materials was a unique feature of the original project. The techniques utilized in the approach to the problem presented many innovative approaches to curriculum development, and therefore, there existed a need to evaluate these procedures and materials.

Purpose and Objectives

The major purpose of this project was to systematically evaluate the content of the course outlines and instructional materials which were developed and disseminated as a result of Project OE-5-85-009, "A Determination of Needed Adjustments and Extensions in the Curricular Patterns of Vocational Education."

The specific objectives of the study were:

1. To determine the distribution of the materials developed by The Center;
2. To determine the extent to which the materials developed by The Center have influenced local and state programs in each of the occupational areas;
3. To assess the effectiveness of the materials as they were utilized in the classroom and their degree of acceptance by teachers at the local level.

III

METHODS AND PROCEDURE

During the early part of 1967, The Center records of purchasers of the off-farm agricultural occupations materials were analyzed to determine the distribution of the materials by purchaser group and geographically. Purchasers were divided into four major groups--vocational agriculture teachers, supervisors of agricultural education, educational institutions, and other interested personnel. Orders for the material were also categorized by states.

In an attempt to determine the influence of the Center-developed materials on state programs in the off-farm agricultural occupations area, a questionnaire (displayed in Appendix B) was developed, refined, and mailed to each head state supervisor of agricultural education. This questionnaire was primarily designed to procure a rating of the value of the materials to state supervisory personnel in establishing state off-farm agricultural occupations programs. However, additional information such as the number of teachers using the materials, the use made of complimentary copies of the material, and insights into the effectiveness of the procedure used by The Center to disseminate the materials to state leaders was secured with this questionnaire.

The major objective of the study was to assess the effectiveness of the materials as they were utilized in the classroom and the acceptance of the materials by teachers at the local level. In order to achieve this objective, a questionnaire (shown in Appendix C) was designed, refined and mailed to 373 teachers identified as purchasers of the materials through Center records.

Teachers who had purchased the materials were divided into two groups: (a) those who had used the materials in the classroom; and (b) those who had not used the materials in the classroom. All teachers, regardless of classification, were asked to provide information, such as the key factors which influenced them to initiate off-farm agricultural occupation programs, the source from which they first became aware of the development of The Center publications, school enrollment and source of school enrollment (urban or rural). Teachers who had used the materials were requested to evaluate the content and effectiveness of the materials and those teachers who had not used the material were requested to indicate the reason or reasons which brought about this decision.

The primary limitations of the study were viewed as follows:

1. The attempt to assess the effectiveness of the materials as they were utilized in the classroom was limited to the course outlines in Agricultural Supply--Sales and Service, Horticultural Service Occupations and Agricultural Machinery Service Occupations. No evaluation was made of the Agricultural Chemicals Technology course outline because of the late date on which the materials were released for purchase and because the materials were designed for use at the post high school level.

2. The use of Center records to identify purchasers of the materials eliminated from the study those teachers who secured the materials from other sources such as teacher educators and state supervisory personnel.

3. The survey was limited to high school teachers of vocational agriculture. No attempt was made to include post high school programs in the evaluation effort as the major group of purchasers was high school vocational agriculture teachers.

4. A large number of no responses occur in the data from those teachers who did not use the material they purchased. Many teachers indicated that they did not use the material but did not provide any further information.

IV

RESULTS OF THE STUDY

Distribution of Materials

Orders by Purchaser Groups

Of primary interest to the developers of the off-farm agricultural occupations materials was the dissemination of the materials. In addition to the national and area meetings designed to acquaint state leaders with the materials, a description of the materials and order blanks for their purchase were included in several issues of the Agricultural Education Magazine. State leaders also were asked to inform local teachers of the availability of the materials. Several states distributed order blanks to teachers and also displayed copies of the materials at the state vocational agriculture teachers conference. As a result of these combined efforts, aimed at making teachers aware of the availability of the materials, The Center received many orders from teachers of vocational agriculture, teacher educators, state supervisory personnel, and other interested people.

The data in Table 1* indicate that the largest single group of purchasers were high school teachers of vocational agriculture. Seventy-one percent of all orders for materials received by The Center were made by this group. Educational institutions (universities, technical schools, community colleges, etc.) comprised approximately seventeen percent of all orders and state supervisory personnel made approximately seven percent of the orders. Approximately four percent of all orders were made by other interested personnel such as students, agri-business personnel, and guidance personnel.

Further analysis of Table 1 indicated that the most frequently ordered materials were the course outlines in Agricultural Machinery Service Occupations, Agricultural Supply, and Horticulture Service Occupations. The publication Planning and Conducting Cooperative Occupational Experience for Off-Farm Agriculture was also frequently purchased, especially by high school vocational agriculture teachers.

Geographical Distribution

In order to determine the geographical distribution of the off-farm agricultural occupations materials, a study of The Center mailing records was conducted. Table 2 was developed from the mailing addresses of those persons who order materials. Analysis of the data in Table 2 indicates that purchase orders were recorded from every state in the United States with the exception of Alaska, Hawaii, South Carolina, and Wyoming. Orders were also recorded from the Virgin Islands, Puerto Rico, Washington, D. C., and Canada. Table 2 shows that the Center-developed materials on off-farm agricultural occupations were widely distributed geographically.

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*In order to simplify reading of the text, all tables have been collected in Appendix A.

Survey of State Supervisors

Special Programs

The data in Table 3 reveal, that 71 percent of the forty-two state supervisors indicated a special program dedicated to providing agriculture teachers with information to improve instruction in off-farm agricultural occupations was conducted at the state agriculture teachers conference. Twenty-six states provided a summer school workshop for this purpose and twenty-three states conducted district or area conferences for the purpose of providing agriculture teachers with information to improve instruction in off-farm agricultural occupations.

Use of Complimentary Materials

As previously reported, complimentary copies of the materials developed by the task force were mailed to head state supervisors. In an attempt to determine the use of these complimentary copies, state supervisors were asked to relate the various uses of these materials in each state. The data in Table 4 indicate the various uses of the complimentary copies as reported by state supervisors. Thirty-one of the forty-two state supervisors responding, indicated that the complimentary materials were kept on file for use as staff reference materials. However, in twelve states the complimentary copies of the off-farm agricultural occupations materials were reproduced and distributed to teachers.

Another use of the complimentary copies as reported by state supervisors was editing the materials, adding local references to adapt the materials to local conditions, then distributing the materials to teachers. Of the fifteen states reporting this activity, nine distributed the edited materials to selected teachers or interested teachers, and six distributed the materials to all teachers. Table 4 shows that the complimentary materials, either in edited or original form, were distributed to teachers in twenty-seven states. This activity indicated a great deal of interest in the off-farm agricultural occupations materials on the part of state supervisory personnel.

Additional Materials Purchased

A further indication of the interest of state supervisors in The Center-developed materials was presented in Table 5. Twenty-six states purchased additional copies of the off-farm agricultural occupations materials for distribution to teachers of vocational agriculture.

Emphasis on the off-farm agricultural occupations is a recent development in vocational agriculture and the materials developed by Center personnel represented one of the earliest efforts to develop curricular materials in this area. Since this program was a new development it was expected that teachers of vocational agriculture would require an in-depth explanation concerning the proper use of the materials. In order to determine the activities conducted in the states to explain the use of the new material, state supervisors were asked to indicate the methods used in their respective states. Data in Table 6 indicate that the most popular activity conducted for this purpose was a special conference on off-farm agricultural occupations.

In eleven states the use of the materials was explained to teachers at the state agriculture teachers conference and in ten states the materials were explained at district or area conferences. In only two states were the materials distributed to teachers without an attempt by state staff personnel to explain their proper use.

Number of Teachers Using Material

State supervisors were requested to report the number of vocational agriculture teachers using the off-farm agricultural occupations materials. The data in Table 7 indicate that 19 state supervisors reported a wide variation in the number of teachers using the materials in each state. Twenty-three state supervisors did not supply this information. One possible explanation for the failure of state supervisors to supply this information was that they were not aware of the number of teachers using the materials.

Effectiveness of Seminars

Of great interest to the task force personnel was the reaction of state supervisors to the national and area seminars conducted by Center personnel to acquaint state personnel with the use of the materials. In order to get an indication of the effectiveness of these seminars, state supervisors who attended either the national or an area seminar were asked to express their feelings as to whether or not they considered meetings of this nature as an effective method of getting new information into the hands of state personnel. The data in Table 8 show that twenty-eight of the forty-two respondents attended either the national or a regional seminar. All twenty-eight state supervisors indicated that these seminars were an effective means of providing state leaders with new information. This would indicate that this type of seminar could be used effectively in a national dissemination program.

Use of Materials in Planning State Programs

The controlling purpose of the original project was to assist states in accelerating the development of instructional programs in off-farm agriculture. An objective of the evaluation was to determine the use made of the Center-developed materials by state supervisory personnel in planning state programs in the area of off-farm agricultural occupations. The data in Table 9 indicates that all of the materials were used by a majority of the states in planning their programs in off-farm agricultural occupations. Three of the publications (Agricultural Machinery Service Occupations, Agricultural Supply--Sales and Service, and Policy and Administrative Decisions in Introducing Vocational and Technical Education in Off-Farm Occupations) were used to a greater extent than the others. The Summary of Research Findings in Off-Farm Agricultural Occupations was used to a lesser extent than others. A possible explanation for the small number of states using the Summary of Research Findings publication was afforded by an analysis of the data in Table 10. Twenty-five states conducted a study of opportunities for employment and skills needed for job entry in off-farm agricultural occupations. Therefore, with local and state data available, state leaders may have had less need for national data in this area.

Survey of Teachers

Teacher Acceptance of Center Materials

The degree of acceptance of The Center materials by teachers at the local level was of primary interest in this study. The data in Table 11 shows that of the 297 teachers who returned questionnaires, 109, nearly 37 percent, were currently using the materials which they purchased. Further, data in Table 11 indicated that 38 percent of the teachers were using the Agricultural Sales and Service materials, nearly 33 percent were using the Agricultural Machinery materials, and 29 percent were using the Horticulture materials. These figures also indicate that many teachers were using more than one set of the materials as 109 teachers were reported using 171 sets of the materials.

The data in Table 12 illustrate the acceptance of the off-farm agricultural occupations materials by states. Illinois led all other states in the number of teachers using the materials. It may be noted from the data in Table 14 that the materials most often used were those in the area of Agricultural Sales and Service, although the materials most frequently purchased by teachers were the Agricultural Machinery materials (see Table 1). A possible explanation for this is that in order to offer the Agricultural Mechanics courses, it was necessary that a school have a well-equipped agricultural mechanics shop whereas the facilities needed to offer the Agricultural Sales and Service program were usually not a critical problem. In any case, further study is needed to determine the reason or reasons for this occurance.

An attempt was made to determine the distribution of the off-farm agricultural occupations materials in the vocational agriculture departments of teachers who used the materials developed by The Center for Vocational and Technical Education. Approximately 50 percent of all the teachers in the user category had copies of all the off-farm agricultural occupations materials. (See table 13) The distribution of publications ranged from 45.8 percent for Occupational Guidance for Off-Farm Agriculture to 71.5 percent for Agricultural Machinery Service Occupations. This might indicate that even though teachers were particularly interested in course outlines, such as Ornamental Horticulture, Agricultural Supply or Agricultural Machinery, they also purchased the supplementary or related materials.

Value of Center Materials in Initiating Programs

In addition to determining the distribution of the off-farm agricultural occupations materials, an effort was made to procure the teacher's evaluation of the value of the materials in initiating and developing programs in off-farm agricultural occupations. In order to obtain this evaluation teachers were asked to rate each publication which they had in their department on a four-point scale ranging from of very much value to no value. The data in Table 14 represent the teacher's evaluation of each publication in the off-farm agricultural occupations series. Twenty-five teachers rated the course outlines in Agricultural Supply and Agricultural Machinery as being of "very much value" in initiating and developing programs in off-farm agricultural occupations. The course outline in Horticulture was rated as of "very much value" by 22 teachers. In general, teachers rated the publications at the "much value" to "very much value" level in initiating and developing programs. The publication which received the lowest rating was the Summary of Research Findings in Off-Farm Agricultural Occupations. Only 5 teachers rated it as of "very much value" and 18 rated it as of "much value." Again, the possible explanation of this lower rating could be the development of such data by states, making this publication of less value to teachers in states where such information was available.

Key Factors Influencing Teachers

An attempt was made to determine the key factors which influenced the teachers to initiate programs in the off-farm agricultural occupations area. One segment in the evaluation of the off-farm agricultural occupations materials included a determination of whether or not selected factors varied between the users and non-users of The Center materials. Table 15 shows that 17 of the 109 teachers who used the materials were influenced by a student survey and 9 teachers who used the materials were influenced by a survey of community needs. Twenty-seven of the 188 teachers who did not use the materials were influenced by a survey of community needs while 14 non-users were influenced by a lack of farming opportunity for students enrolled in vocational agriculture classes. It was apparent that there was a wide variety of factors which influenced teachers to initiate off-farm agricultural occupations materials.

Sources Providing Awareness of Center Developed Materials

In an attempt to obtain an indication of the effectiveness of the national and regional seminars as a vehicle for the dissemination of newly developed ideas or materials in vocational agricultural education, the teachers were asked to name the source from which they first became aware of the development of The Center materials in the area of off-farm agricultural occupations. By checking the names of individuals named by the teachers against a roster of persons attending the national and regional seminars, an indication of the effectiveness of this dissemination method was obtained. Table 16 shows the major sources from which teachers first became aware of the off-farm agricultural occupations materials. State or district supervisors and teacher educators were listed by both users and non-users of the materials as the source from which they first became aware of the availability of the materials. Other sources such as administrators, other agriculture teachers, the Agricultural Education Magazine, and state vocational agriculture teachers meetings were also named by the teachers. State or district supervisors and teacher educators were by far the most important links in the process of disseminating the materials from The Center to local vocational agriculture teachers. A check of the names of state or district supervisors and teacher educators listed by teachers as first sources of information against the roster of personnel attending either the national seminar or a regional seminar indicated that 78.2 percent of the individuals named by teachers using the material had attended one of these meetings. Approximately 62 percent of the individuals named by non-users attended either the national or a regional seminar. This was further evidence that national and regional conferences or seminars were an excellent means of not only providing state leaders with new information, but were also useful in getting new information to local vocational agriculture teachers.

School Size and Location and Acceptance of Center Materials

One aspect of the evaluation was to determine if the size and location of the school in which the teacher was employed had any effect on the decision of the teacher to use the off-farm agricultural occupations materials. Table 17 shows the size of the schools in which both users and non-users of the materials were employed. No significant pattern or trend was evident between size of high school and the decision of the teacher to use or not use the off-farm agricultural occupations materials.

The data in Table 18 shows the attendance area of the schools included in the survey. A major percentage of the teachers who responded to the questionnaire were employed in schools attended by students who lived in a country area. It can be concluded from the data that the attendance area of the school was not generally a factor in the decision of the teacher to use or not use the materials.

Reasons Materials Were Not Used

In addition to securing an evaluation of the materials by teachers who used them in the classroom, an attempt was made to determine the reasons why teachers did not use the materials which they purchased. The data in Table 19 presents some of the reasons teachers gave for not using the materials. The reason given most often was that the teacher lacked enough time to adapt the materials to his program. This could be an indication that off-farm agricultural occupation courses were added to the regular production agriculture programs which teachers normally offer in high school programs. If this were the case the additional demand on the teachers' time could have resulted in a lack of sufficient time to adapt the off-farm agricultural occupations materials to the program. Further analysis of the data in Table 19 indicates that 11.1 percent of the teachers responding stated that they had decided not to offer an off-farm agricultural occupations program. An additional 8.0 percent of the teachers indicated that they planned to use the materials in the

1967-68 school year, their 4.2 percent indicated that program was in the planning stage, and 1.0 percent stated that the materials were reviewed for future use. This is an indication that the off-farm agricultural occupations materials will be used at some future data. If this indication is accurate, an additional 10 percent of the teachers included in the survey could be expected to eventually use the materials. It is also interesting to note that only three teachers indicated that the materials were not adaptable to their situation.

The Use Made of the Agricultural Supply, Horticulture and Agricultural Machinery Modules

As the course outlines in Agricultural Supply, Horticulture, and Agricultural Machinery were prepared on the basis of the module concept (module--a complete, self-contained part of the course) an attempt was made to determine which modules within the course outline were most often used by vocational agriculture teachers. The data in Tables 20, 21 and 22 indicate the number of teachers using individual modules in each of the course outlines. The data in Table]0 indicate that the modules in the area of Agricultural Supply which were most often used were Career Opportunities in Agricultural Sales and Service, Human Relations in Agricultural Occupations, and Agricultural Salesmanship. Approximately three out of every four teachers who used the course outline in Agricultural Supply used these three modules.

Table 21 shows that the modules which were most frequently used in Horticulture were: Exploring Occupational Opportunities in Ornamental Horticulture, Identifying Horticultural Plants, and Propagating Horticultural Plants. From 70 to 78 percent of the teachers used these three modules. Sixty-six percent of the teachers used the Growing Horticultural Plants and Using Soil and Other Plant Growing Media Effectively modules.

The number and percentage of the teachers using individual modules in the Agricultural Machinery course outline are presented in Table 22. Seventy-three percent of the teachers used the Tractor Tune-up and Maintenance module whereas The Gasoline Tractor Engine Systems module and the Human Relations in Agricultural Occupations module were used by 57 percent of the teachers. With the exception of three modules--Hydraulic Power Transfer Systems, Diesel Engine Systems, and Adjustment, Maintenance, and Repair of Crop Harvesting Machinery--at least 40 percent of the teachers used all the modules in the course outline in Agricultural Machinery.

The course outlines and modules were designed to aid the teacher in lesson preparation. Included in the instructions for the use of the materials was the observation that the subject matter content provided for each competency was not complete enough for all lesson preparation--the teacher must have used the references listed at the end of each competency and other references to supply the information needed to properly teach each competency. In an effort to determine how teachers used the course outlines, the teachers were asked to indicate the primary use made of the materials they used. As shows in Table 23, the complete set was used as provided and supplemented with other materials as the basis for lesson plan preparation. This use was followed closely by teachers who used selected modules as reference in preparing lesson plans. A majority of the teachers used the materials as they were intended to be used by the task force which designed them.

Information on Classes With Which Materials Were Used

Each course outline was designed for use with a specific group of students. The Agricultural Supply course was designed to prepare high school students for successful job entry in retail businesses that sell agricultural supplies and services. The Horticulture course was designed to assist high school students to develop the degree of competence needed for occupational entrance as service workers in such establishments as nurseries, garden centers, greenhouses, golf courses, and ground maintenance departments. The Agricultural Machinery course was designed to develop the competence needed at the post high school level for occupational entrance and advancement in service occupations in agricultural machinery dealerships.

In order to determine whether the teachers were using the material with the group intended by the authors, the teachers were asked to provide information concerning the grade level with which they were using the materials. Table 24 indicates that in most cases teachers were using the Agricultural Supply materials with the 11th and 12th grades. The Horticulture materials, in addition to 11th and 12th grades, were also being used to a great extent with 9th and 10th graders. The agricultural Machinery materials were primarily used with 11th and 12th graders.

The course materials were also designed for use with students with specific ability levels. The Agricultural Supply materials were designed for use with high school students of average ability. The Horticulture materials were designed to be especially helpful in preparing those persons who were socially or economically deprived--those youth who were disadvantaged or handicapped as a result of social barriers related to language, values, incentives or outlooks. The Agricultural Machinery materials were designed for use with (1) farmers who have left the farm seeking employment elsewhere, (2) high school graduates desiring employment in agricultural machinery service occupations who did not receive training for these occupations in high school, (3) high school graduates who needed a higher degree of competence for occupational entry into these occupations, (4) high school dropouts who were capable of mastering the skills, abilities, and understanding necessary for occupational entry in the agricultural machinery service occupations and who show an earnest desire for such employment, (5) unemployed persons capable of carrying out the responsibilities of their jobs and who show an earnest desire for occupational entry in the service occupations in agricultural machinery dealerships, and (6) persons presently engaged in these occupations desiring to update their understandings, skills, and abilities.

The data in Table 25 indicate that the majority of the teachers rated their classes as average in ability or of mixed ability. Very few teachers rated their classes as having above average ability, and only a few rated their classes as below average. When the purpose for which the materials were designed was considered, very few teachers were using the Horticulture materials with disadvantaged or handicapped students. The Agricultural Machinery modules were also not being used as intended by the author since they were written for post high school students and were being used in the high school.

The teachers were asked to indicate the average class size with which each of the course outlines were used. Table 26 indicated that the most common class size was 10 or less in Agricultural Supply and Agricultural Machinery courses. The most common class size in Horticulture courses was from 16 to 20. Very few classes had above twenty members regardless of the program offered.

The size of an ideal class has always been a problem in vocational agriculture and it was felt that after teaching one of the new programs the teachers would have a definite opinion. The majority of the teachers indicated a preference for the class size to be either 10 or less or 11 to 15 for both the Agricultural Supply and Agricultural Machinery courses. However, 17 of the 65 respondents did not respond to the question of an ideal class size in Agricultural Supply as contrasted to only 3 non-responses in Horticulture and 1 in Agricultural Machinery. This would indicate uncertainty or inexperience with the demands of a program in Agricultural Supply. Most of the teachers indicated that either 11 to 15 or 16 to 20 students would comprise an ideal class size in Horticulture.

Occupational work experience was a major factor written into the course outlines by the task force. The task force considered supervised work experience as an integral part of all the courses. In order to determine teacher opinions on this matter, the teachers in the survey to indicate their opinion regarding the necessity of work experience in addition to classroom experience in off-farm agricultural occupations courses. Data in Table 28 indicates that a large majority of the teachers surveyed (66 percent or more) replied that work experience was necessary in addition to classroom experience in Agricultural Supply, Horticulture and Agricultural Machinery programs. Equally revealing however, was the fact that from 26 to 30 percent of the teachers felt that a work experience was not necessary to provide training in the three programs.

As the objective of any vocational education program is eventual placement in the occupation for which the student is being trained, the teachers included in this survey were asked to provide placement figures where possible. Data in Table 29 reveal that in the Agricultural Supply program, 42 percent of the program graduates were placed in a gainful occupation in the area of training. Thirty-three percent of the graduates of Agricultural Machinery Programs were successfully placed in the area for which they were trained. In the Horticulture programs only 9.3 percent of the graduates were successfully placed. It is necessary to add at this point that many teachers reported that a large number of their students were still enrolled in high school or were just completing programs when the survey was conducted. A survey at a later date would probably show a higher placement ratio.

Rating of the Materials by Teachers

In a final effort to obtain an over-all evaluation of the course outlines by teachers who had used them in the classroom, the teachers were asked to rate, on a four-point scale ranging from not appropriate to very appropriate, the modules which they had used. Items to be rated included major teaching objectives, suggested time allotments, suggested introductions, suggested competencies, subject matter content, suggested teaching-learning activities, suggested instructional and reference materials and suggested occupational experiences. The teacher ratings of each of these items for the Agricultural Supply, Horticulture and Agricultural Machinery course outlines are presented in Tables 30, 31 and 32. These tables indicate that a majority of the teachers rated each item, with the exception of suggested time allotments, in the appropriate to very appropriate category. Suggested time allotment in all three course outlines were rated lower than any other item. From additional comments provided by the teachers involved it was evident that the teachers considered the suggested time allotments as being excessive in length.

It should be noted at this point that the task force personnel in developing the materials provided suggested time allotments and did not consider these suggestions as rigid in nature. In summary, a majority of the teachers reacted favorably to the major features of the modules.

Several teachers made additional comments concerning the usefulness of the off-farm agricultural occupations materials. The suggestion which occurred most often was that the materials could be improved by developing individual study guides, assignment sheets, individual activities, unit exams and answer sheets. The following quote from one of the teachers possibly illustrates why this suggestion was predominant.

> "I think the material is excellent in its present form when you are teaching the area to an entire class, but when a variety of off-farm occupations are involved, too much time is needed to adapt the materials to each individual or groups of individuals so that the students can use the materials with a minimum of teacher time other than general supervision."

In view of these comments and the generally favorable attitude of teachers toward the off-farm agricultural occupations materials, a possibility for further effort in this area would be the development of individualized instructional units in off-farm agricultural occupations or the adaptation of the existing course outlines in Agricultural Supply, Horticulture and Agricultural Mechanics to individualized instructional units.

V

DISCUSSION, CONCLUSIONS, RECOMMENDATIONS

Discussion

In the initial project, an extensive review of the materials was made by persons qualified in the respective areas of specialization. Much valuable assistance and guidance was provided in the development of the materials resulting from the project. However, these evaluations were made before the materials were used in the classroom. In an effort to secure an evaluation of the materials by teachers who had used them in the classroom, an evaluation sheet for each module was included with every set of materials distributed. A general request was included, asking that these sheets be returned to The Center after the completion of each module. Only a handful of the evaluation sheets were returned and a comprehensive evaluation of the materials was impossible.

Recognizing that an evaluation was essential and that the previous design was not working, the current project was instigated to obtain an evaluation of the materials after they had been used in a classroom situation. The study revealed needed adjustments and extensions in vocational agrciulture curriculums in the off-farm area.

Several limitations of this study should be pointed out. The data obtained from the questionnaire was based on returns from teachers identified from Center records as purchasers of the materials. The use of this procedure excluded from the study those teachers who received the materials from such sources as state supervisors and teacher educators.

As the majority of the persons who purchased the materials were high school teachers of vocational agriculture, no attempt was made to include post high school teachers in the survey. The study was further limited by the exclusion of the Agricultural Chemicals Technology course outlines. However, this was necessary because of the late date on which these materials were released for purchase and the fact that they were specifically designed for classes at the post high school level.

A large number of no responses occur in the data from those teachers who did not use the materials which they purchased. Many teachers indicated that they did not use the materials but did not provide any further information.

Conclusions

The following conclusions were based upon the findings of the study.

1. The materials were well distributed geographically among teachers of agriculture. Of the orders received from 47 states, the Virgin Islands, Puerto Rico, Washington, D. C., and Canada, 71.6 percent were made by vocational agriculture teachers.

2. State supervisory personnel were greatly interested in providing instruction in the off-farm agricultural occupations area. A large proportion of the state supervisors surveyed reported that special activities such as programs at the state agriculture teachers conference, summer school workshops, district or area conferences, special conferences for teachers conducting pilot programs, and educational TV programs were conducted by state staff personnel in 1966 to provide vocational agriculture teachers with information designed to improve instruction in the off-farm agricultural occupations area.

3. State supervisory personnel reacted favorably to the materials developed by The Center. The complimentary copies of the materials were used primarily as staff reference materials. In several states the complimentary materials were reproduced, with or without editing, and distributed to teachers. In 26 states additional copies of the off-farm agricultural occupations materials were purchased with state funds and distributed to teachers. The materials were rated by state supervisors as having a high value in planning state programs in off-farm agricultural occupations.

4. The acceptance of the off-farm agricultural occupations materials by the teachers included in the survey was encouraging. Approximately 36.7 percent of the teachers responding were currently using the materials which they purchased.

5. Teachers were primarily interested in course outlines which would aid them in establishing off-farm agricultural occupations courses in the areas of Agricultural Supply, Horticulture, and Agricultural Machinery. Orders from teachers for these publications were much more numerous than orders for related publications. However, those teachers who purchased related materials rated them as being of value in planning and initiating off-farm agricultural occupations programs.

6. The Agricultural Supply course outline and modules were used by a larger number of teachers than the other course outlines although the number of orders for the Agricultural Machinery and Horticulture materials were comparable or higher than orders for the Agricultural Supply materials. A possible explanation for this occurrance was that, in order to offer the Horticulture and Agricultural Machinery programs, additional and costly supplies and facilities were necessary. Also, the teacher would need certain specialized skills to adequately teach a Horticulture or Agricultural Mechanics program while the Agricultural Supply program was not entirely removed

from the agriculture programs currently offered and thus were more easily synthesized into an ongoing program.

7. A majority of the teachers used the course outlines and modules as they were intended to be used by the task force which developed them. The materials were primarily used in lesson plan preparation and supplemented with other materials or selected modules were used as a reference in lesson plan development.

8. The Agricultural Supply and Horticulture materials were used with the grade level for which they were intended. However, the Agricultural Machinery materials were used with eleventh and twelfth grade students when they were designed for use with post high school students. This would suggest that the Agricultural Machinery materials were not as highly developed as the task force intended or that eleventh and twelfth grade students are capable of performing at a higher level than realized by the task force.

9. The Horticulture materials were not used with the student group for which they were intended. These materials were used primarily with students of average ability although intended to be used with disadvantaged students. However, those teachers who used the materials rated them as appropriate for the group with which they were used.

10. One other apparent misuse of the materials was that even though the materials were designed for full-time programs, it appears that some teachers may have integrated the materials into their production programs. While there were probably administrative reasons for this, it, nevertheless, was use of the materials in a manner for which they were not intended.

11. Teachers who were using the materials considered the materials to be appropriate in design and usefulness and of much value in initiating and developing off-farm agricultural occupations programs.

12. The primary reasons individual teachers did not use the materials which were purchased was that the teacher lacked sufficient time to adapt the materials to his local program and secondly, the teacher simply decided not to offer an off-farm agricultural occupations program.

13. The physical characteristics of a school did not affect whether or not teachers used the off-farm agricultural occupations materials. The data did not yield any indication that the school enrollment or rural-urban classification of a school affected the teachers' decision to use or not use the materials. In addition the teacher's decision to initiate programs in off-farm agricultural occupations was influenced by such factors as a student survey or a survey of community needs. Again, there were no distinct differences between those teachers who used the material and those who did not.

14. Although the present design of the off-farm agricultural occupations materials was rated high in usefulness, many teachers expressed a need for individual study guides, assignment sheets, and unit exams to supplement the

present materials which would allow the materials to be used in a variety of situations with a minimum of teacher effort. This suggestion coupled with the fact that many teachers were using more than one set of materials indicates that teachers were attempting to offer instruction in more than one off-farm agriculture area rather than concentrating on one specialized area.

15. The national and regional seminars conducted by The Center provided a successful technique in developing an awareness of the new materials on the part of state leaders in Agricultural Education. Of the 28 state supervisors attending these seminars, 100 percent indicated that these seminars were effective means of providing state leaders with new information. Another indication of the success of the seminars was documented when the teachers who purchased the materials named supervisors or teacher educators who had attended one of the seminars as the source from which they first became aware of the development of the off-farm agricultural occupations materials.

16. As a result of the rating which the off-farm agricultural occupations materials were given by teachers who used them, the operational procedures used in developing the off-farm agricultural occupations materials should be considered in planning future curriculum development activities.

Recommendations

On the basis of the findings of this study, the researchers feel the following recommendations should be considered.

1. An effort should be made by state and area or district supervisory personnel to acquaint more vocational agriculture teachers with the off-farm agricultural occupations materials which have been developed for use at the local level. The results of the evaluation of the use and utility of the materials should be made available to teachers. These two activities should increase the number of teachers aware of the development of the materials and should give interested teachers information upon which to base a decision on whether or not to purchase the materials.

2. Further study should be conducted to determine why teachers were able to successfully use the Agricultural Machinery materials with eleventh and twelfth grade students when the materials were designed for use at the post high school level.

3. Further study should be conducted to determine why teachers did not use the Horticulture materials with disadvantaged students. Perhaps teachers perceived the materials as being too advanced for the disadvantaged, or disadvantaged students were not enrolled in horticulture classes.

4. Future curriculum material activities should be designed to develop individual study guides, assignment sheets, and unit tests which will allow teachers in varying situations to offer programs in more than one off-farm agriculture area with a minimum of teacher time and effort. With these ad-

ditional materials available, it would be possible for a one-teacher department to offer individualized instruction in more than one area even though the number of students interested in each specialized area was minimal.

5. Future curriculum development activities in vocational and technical education should consider the procedure used to develop and disseminate the off-farm agricultural occupations materials.

APPENDIX A

TABLE 1

Distribution of Orders for Off-Farm Agricultural Occupations Materials According to Major Purchaser Groups

Major Groups	Publication A*		Publication B		Publication C		Publication D		Publication E		Publication F		Publication G		Publication H		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Teachers	222	68.0	258	71.4	213	68.0	283	70.7	343	70.2	361	76.8	385	75.1	160	67.5	2225	71.6
Supervisors	27	8.2	28	7.7	22	7.0	25	6.2	30	6.1	29	6.1	35	6.8	19	8.0	215	6.9
Educational Institutions	67	20.5	64	17.7	65	20.7	73	18.2	77	15.7	71	15.1	80	15.6	50	21.0	547	17.6
Other	10	3.0	11	3.0	13	4.1	19	4.7	38	7.7	9	1.9	12	2.3	8	3.3	120	3.8
Total	326	99.7	361	99.8	313	99.8	400	99.8	488	99.7	470	99.9	512	99.8	237	99.8	3107	99.9

*Publication Identification

A. Policy and Administrative Decisions in Introducing Vocational and Technical Education in Agriculture for Off-Farm Occupations.
B. Vocational and Technical Education in Agriculture for Off-Farm Occupations.
C. Summary of Research Findings in Off-Farm Agricultural Occupations.
D. Planning and Conducting Cooperative Occupational Experience for Off-Farm Agriculture.
E. Horticulture - Service Occupations.
F. Agriculture Supply - Sales and Service.
G. Agricultural Machinery - Service Occupations.
H. Organizing to Provide Agricultural Education for Off-Farm Occupations.

TABLE 2

Distribution By States and Purchaser Groups of Orders for Center-Developed Materials on Off-Farm Agricultural Occupations

	Number of Orders				
State	Teachers	Supervisors	Educational Institutions	Other	Total
Alabama	0	0	4	0	4
Arizona	3	2	2	1	8
Arkansas	2	1	5	0	8
California	49	1	6	6	62
Colorado	3	4	1	0	8
Connecticut	6	0	1	0	7
Delaware	0	1	1	0	2
Florida	22	3	4	2	31
Georgia	1	2	0	0	3
Hawaii	0	0	0	0	0
Idaho	4	1	0	0	5
Illinois	87	0	6	4	97
Indiana	37	3	2	7	49
Iowa	32	0	10	2	44
Kansas	25	4	4	0	33
Kentucky	6	0	3	1	10
Louisiana	1	1	2	2	6
Maine	6	2	1	1	10
Maryland	21	0	1	2	24
Massachusetts	4	1	0	0	5
Michigan	33	0	6	1	40
Minnesota	18	0	6	2	26
Mississippi	1	2	4	0	7
Missouri	2	0	2	1	5
Montana	6	3	1	0	10
Nebraska	5	1	4	3	13
Nevada	0	1	0	0	1
New Hampshire	0	0	2	0	2
New Jersey	4	0	1	1	6
New Mexico	0	0	3	1	4

Table 2 (Continued)

State	Teachers	Supervisors	Educational Institutions	Other	Total
New York	13	0	4	0	17
North Carolina	2	1	0	1	4
North Dakota	25	1	0	0	26
Ohio	17	1	4	3	25
Oklahoma	4	0	3	0	7
Oregon	10	3	2	11	26
Pennsylvania	27	1	10	5	43
Rhode Island	2	0	0	1	3
South Carolina	0	0	0	0	0
South Dakota	2	0	1	0	3
Tennessee	6	1	0	1	8
Texas	3	1	9	0	13
Utah	6	0	1	0	7
Vermont	5	2	1	0	8
Virginia	4	2	2	2	10
Washington	15	0	2	2	19
West Virginia	2	1	2	2	7
Wisconsin	40	2	4	3	49
Wyoming	0	0	0	0	0
Virgin Islands	0	0	0	1	1
Puerto Rico	0	0	1	0	1
Washington, D.C.	0	0	0	1	1
Canada	0	0	0	2	2
Total	561	49	128	72	810

TABLE 3

Activities Reported by State Supervisors Which Were Conducted to Provide Agriculture Teachers With Information to Improve Instruction in Off-Farm Agriculture

Activity	Number States Responding	Number Conducting Activity	Percentages
A special program during the state agriculture teachers conference	42	30	71.4
A summer school workshop	42	26	61.9
District or area conferences	42	23	54.7
Special conferences for teachers conducting pilot programs	42	19	45.2
An educational TV program	42	5	11.9
Other*	42	5	11.9

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*Includes newsletter, in-service meetings, radio programs, and departmental visits (2).

TABLE 4

Use of Complimentary Copies of Center-Developed Materials in Off-Farm Agricultural Occupations as Reported by State Supervisors

Use of Complimentary Materials	Number Respondents	Number Reporting	Percentages
Kept on file for staff reference	42	31	73.8
Reproduced (without editing) and distributed.	42	12	28.5
Edited (adapted to local conditions, local references inserted, etc.) and distributed.	42	15	35.7

TABLE 5

Number of States in Which Additional Center Materials Were Purchased with State Funds for Distribution to Teachers

Purchased	Number	Percentages
Yes	26	61.9
No	12	28.5
No Response	4	9.5
Total	42	99.9

TABLE 6

Activities Employed by State Supervisory Personnel To Explain Off-Farm Agricultural Occupations Materials Distributed to Teachers of Vocational Agriculture

Activity	Number of States Responding	Number Conducting Activity	%
Special Conference on Off-Farm Agricultural Occupations	15	12	80.0
The State Agriculture Teacher Conference	15	11	73.3
District or Area Conferences	15	10	66.6
Materials Were Not Explained to Teachers	15	2	13.3
Educational TV Program	15	1	6.6
Individual Teachers	15	1	6.6

TABLE 7

State Supervisors Report of the Number of Teachers Using the Off-Farm Agricultural Occupations Materials

Number of Teachers Using Materials	States Reporting	Percentages
1 - 10	7	16.7
11 - 30	5	11.9
31 - 50	4	9.5
51 - 75	3	7.1
No Response	23	54.8
Total	42	100.0

TABLE 8

State Supervisors' Rating of the Effectiveness of the National and Regional Seminars as a Means of Providing State Leaders With New Information

Response	Number of Supervisors	Percent	Rating	
			Effective	Not Effective
Did Attend	28	66.7	28	0
Did Not Attend	13	30.9	-	-
No Response	1	2.4	-	-
Total	42	100.0	28	0

TABLE 9

State Supervisor's Indication of the Use Made of The Center-Developed Materials in Planning State Programs of Off-Farm Agricultural Occupations

Publication	Great	Some	Little	No	Total*
Policy and Administrative Decisions in Introducing Vocational and Technical Education in Off-Farm Occupations	10	24	4	1	39
Summary of Research Findings in Off-Farm Agricultural Occupations	3	21	13	3	40
Planning and Conducting Cooperative Occupational Experience in Off-Farm Agriculture	8	21	10	0	39
Horticulture - Service Occupations (course outline and 12 modules)	9	23	6	2	40
Agricultural Supply - Sales and Service Occupations (course outline and 12 modules)	13	14	12	0	39
Agricultural Machinery - Service Occupations (course outline and 16 modules)	15	19	5	1	40
Total	58	122	50	7	237

*Some state supervisors did not rate each item, thus the totals are less than the total number included in the survey.

TABLE 10

Number of States Conducting a Study of Opportunities for Employment and Skills Needed for Job Entry in Off-Farm Agricultural Occupations

Conducted	Number	Percentages
Yes	25	59.6
No	15	35.7
No Response	2	4.7
Total	42	100.0

TABLE 11

Acceptance of Off-Farm Agricultural Occupations Materials by Teachers Included in Survey

Item	Number	Percentages
Teachers not using materials	188	63.3
Teachers using materials	109	36.7
	297	100.0
Sets of materials being used		
Horticulture	50	29.3
Agricultural Machinery	56	32.7
Agricultural Sales and Service	65	38.0
	171*	100.0

*Some teachers were using more than one set of materials thus the total exceeds 109.

TABLE 12

Acceptance of Off-Farm Agricultural Occupations Materials by States

STATE	Questionnaires Mailed	Questionnaires Returned	Users	Non-users	Horticulture	Ag. Machinery	Ag. Supply
Arizona	1	1	1	0	1	1	0
Arkansas	2	1	1	0	0	1	0
California	25	17	2	15	1	0	1
Connecticut	5	3	1	2	1	1	1
Florida	12	8	5	3	3	3	3
Georgia	1	1	1	0	0	0	1
Idaho	5	4	2	2	1	0	1
Illinois	68	58	21	37	7	13	19
Indiana	34	26	10	16	3	7	6
Iowa	22	19	7	12	0	5	5
Kansas	13	12	4	8	3	2	3
Kentucky	6	6	2	4	2	0	0
Louisana	1	1	0	1	0	0	0
Maine	6	5	3	2	3	1	2
Maryland	13	10	4	6	3	2	1
Massachusetts	3	3	2	1	1	1	0
Michigan	20	17	3	14	2	2	1
Minnesota	11	9	4	5	0	1	4
Montana	6	3	2	1	0	2	0
Nebraska	2	2	0	2	0	0	0
New Jersey	2	2	1	1	1	0	0
New York	6	3	0	3	0	0	0
North Carolina	2	1	0	1	0	0	0
North Dakota	24	17	2	15	1	1	2
Ohio	7	6	5	1	2	1	4

Table 12 (Continued)

STATE	Questionnaires Mailed	Questionnaires Returned	Users	Non-users	Horticulture	Ag. Machinery	Ag. Supply
Oregon	6	5	4	1	3	2	1
Pennsylvania	13	10	4	6	3	2	2
Rhode Island	2	2	0	2	0	0	0
South Dakota	1	0	0	0	0	0	0
Tennessee	2	0	-	-	-	-	-
Texas	5	2	1	1	1	1	1
Utah	4	3	2	1	1	1	1
Vermont	5	5	3	2	1	2	1
Virginia	2	2	0	2	0	0	0
Washington	6	5	2	3	0	1	1
West Virginia	3	3	1	2	0	0	1
Wisconsin	27	25	9	16	6	3	3
Totals	373	297	109	188	50	56	65

TABLE 13

Distribution of Center-Developed Publications on Off-Farm Agricultural Occupations in the Agriculture Departments of Teachers Who Used the Course Outlines

PUBLICATIONS	Teachers Using Materials	Publication Available	Percent
Policy and Administrative Decisions in Introducing Vocational and Technical Education in Agriculture for Off-Farm Occupations	109	52	47.7
Vocational and Technical Education in Agriculture for Off-Farm Occupations	109	58	53.2
Summary of Research Findings in Off-Farm Agricultural Occupations	109	50	45.8
Planning and Conducting Cooperative Occupational Experience in Off-Farm Agriculture	109	60	55.0
Occupational Guidance for Off-Farm Agriculture	109	50	45.8
Horticulture - Service Occupations (course outline and twelve modules)	109	75	68.8
Agricultural Supply - Sales and Service Occupations (course outline and twelve modules)	109	74	67.8
Agricultural Machinery - Service Occupations (course outline and sixteen modules)	109	78	71.5

TABLE 14

Teachers Evaluation of Center-Developed Publications For Use in Initiating and Developing Off-Farm Agricultural Occupations Programs

Publications	Value of Publications Very Much	Much	Little	No	Total
Policy and Administration Decisions in Introducing Vocational and Technical Education in Agriculture for Off-Farm Occupations	7	23	18	1	49
Vocational and Technical Education in Agriculture for Off-Farm Occupations	9	30	13	2	54
Summary of Research Findings in Off-Farm Agricultural Occupations	5	18	18	3	44
Planning and Conducting Cooperative Occupational Experience in Off-Farm Agriculture	13	29	14	2	58
Occupational Guidance for Off-Farm Agriculture	10	21	14	3	48
Horticulture - Service Occupations (course outline and twelve modules)	22	23	14	6	65
Agricultural Supply - Sales and Service Occupations (course outline and twelve modules)	25	30	9	2	66
Agricultural Machinery - Service Occupations (course outline and sixteen modules)	25	36	7	1	69
Totals	116	210	107	20	453

TABLE 15

Key Factors Influencing Teachers to Initiate Programs in Off-Farm Agricultural Occupations

Factor	*Users	**Non-Users
Student Survey	17	9
Survey of Community Needs	9	27
Need to Broaden Program	6	-
Lack of Opportunity to Farm	5	14
Interest of School Administration	5	2
State Supervisor	5	2
Advisory Council	4	3
Summer Conference of Teachers	4	1
Sagging Agricultural Enrollment	3	2
Change in Agriculture	3	-
In-Service Workshop	3	4
Area Supervisors	2	1
Prior Business Experience of Instructor	2	-
Teacher Trainer	2	1
Personal Interest	2	-
Development of Area Vocational Schools	2	-
Other ***	2	3
No Response	31	119
Total	109	188

*Users are defined as those teachers who purchased and are currently using Center materials on off-farm agricultural occupations.

**Non-users are defined as those teachers who purchased but did not use the Center materials on off-farm agricultural occupations.

***Includes an Agricultural Education Magazine Article, the emphasis of the 1963 Vocational Education Act, or did not initiate an off-farm program.

TABLE 16

Sources from Which Teachers First Became Aware Of the Development of the Materials on Off-Farm Agricultural Occupations

Source	Users (n=109)	Non-users (n=188)
National or Regional Seminar	7	4
State or District Supervisor	38	49
Teacher Educator	39	25
School Administrator	2	0
Agriculture Teacher	7	7
Agricultural Education Magazine	9	11
State Vo-Ag Teachers Meeting	4	9
Other *	7	2
No Response	4	81
Total	117**	188

*Includes literature received through mail, vo-ag teachers workshop, NVATA, and committee meetings.

**Several teachers named more than one source, thus total exceeds 109.

TABLE 17

Enrollment of High Schools in Which Teachers Responding to Survey were Employed

High School Enrollment	Users (n=109)	Non-Users (n=188)
50-100	2	2
101-200	10	17
201-300	12	11
301-400	9	11
401-500	6	11
501-600	7	11
601-700	2	3
701-800	6	4
801-900	4	0
901-1000	5	2
1001-up	16	17
No Response	30	99
Total	109	188

TABLE 18

Rural-Urban Classification
Of Schools Included in Survey

Classification	Users	Non-Users
Rural*	80	73
Urban**	28	31
No Response	1	84
Total	109	188

*Students live in country area (farm or non-farm)

**Students live within city limits

TABLE 19

Reasons Teachers Did Not Use Center Developed Off-Farm Agricultural Occupations Materials

Reasons	Number	Percentages
Lacked enough time to adapt materials to my program	40	21.2
Decided not to offer Off-Farm Agricultural Occupations course	21	11.1
Do not plan to use until 1967-68	15	8.0
Program in planning stage	8	4.2
Materials were not adaptable to my situation	3	1.6
Used materials to obtain reference materials	2	1.0
Reviewed for future use	2	1.0
Other *	7	3.7
No Response	90	47.8
Total	188	99.6

*Other reasons included the following: materials were too complicated to be used, materials came too late, misplaced materials, lacked enrollment, lacked resource materials, and limited by rules of research project.

TABLE 20

Agricultural Supply Modules Used By Teachers Included In Survey

Modules	Number of Teachers Using Module (n=65)	Percent*
Career Opportunities in Agricultural Sales and Service	50	76.9
Orientation to the Supervised Occupational Experience Program	28	43.0
Human Relations in Agricultural Occupations	49	75.3
Agricultural Salesmanship	48	73.8
Organizations and Functions of Agricultural Businesses	36	55.3
Business Procedures	35	53.8
Feed-Sales and Services	36	53.8
Crop, Lawn and Garden Seeds-Sales and Service	22	33.7
Fertilizers-Sales and Service	30	46.1
Agricultural Chemicals-Sales and Service	23	33.7
Petroleum and Petroleum Products Sales and Service	11	16.8
Miscellaneous Agricultural Supplies and Small Equipment-Sales and Services	23	33.7

*Percent = $\frac{\text{Number of Teachers using Individual Modules}}{\text{Total Number of Teachers using Agricultural Supply Materials}}$

TABLE 21

Horticulture Modules Used by Teachers Included In Survey

Modules	Number of Teachers Using Module (n=50)	Percent*
Exploring Occupational Opportunities in Ornamental Horticulture	39	78.0
Identifying Horticultural Plants	35	70.0
Propagating Horticultural Plants	38	76.0
Growing Horticultural Plants	33	66.0
Using Soil and Other Plant Growing Media Effectively	33	66.0
Recognizing and Controlling Plant Pests	21	42.0
Constructing, Maintaining, and Using Plant Growing Structures	13	26.0
Agricultural Salesmanship	20	40.0
Establishing and Caring for Lawns and Turf	27	54.0
Operating, Repairing, and Maintaining Small Power Equipment	14	28.0
Using and Caring for Ornamental Plant Materials and Landscape Structures	15	30.0
Human Relations in Agricultural Occupations	18	36.0

$$* \text{ Percent} = \frac{\text{Number of Teachers Using Individual Modules}}{\text{Total Number of Teachers Using Horticulture Materials}}$$

TABLE 22

Agricultural Machinery Modules Used by Teachers Included in Survey

Modules	Number of Teachers Using Module (n=56)	Percent*
Organization and Management of Agricultural Machinery Dealerships	31	55.3
Agricultural Machinery Service Department Operating Procedures	27	48.2
Agricultural Machinery Parts Department Operating Procedures	30	53.5
Agricultural Salesmanship	31	55.3
Human Relations in Agricultural Occupations	32	57.1
Metal Fusion and Fabrication Welding	25	44.6
Agricultural Machinery Assembly and Lubrication	29	51.7
Mechanical Power Transfer Systems	23	41.0
Hydraulic Power Transfer Systems	20	35.7
Adjustment, Maintenance, and Repair of Tillage, Planting, Spraying, and Fertilizing Machinery	29	51.7
Adjustment, Maintenance, and Repair of Crop Harvesting Machinery	22	39.3
Adjustment, Maintenance, and Repair of Small Gasoline Engines	27	48.2
Tractor Tune-up and Maintenance	41	73.2
Gasoline Tractor Engine Systems	32	57.1
Diesel Engine Systems	21	37.5
Tractor Repair	30	53.5

$$*\text{Percent} = \frac{\text{Number of Teachers Using Individual Modules}}{\text{Total Number of Teachers Using Agricultural Machinery Materials}}$$

TABLE 23

Primary Use of Modules by Teachers Included in Survey

Use	Agriculture Supply	Horticulture	Agriculture Machinery
Complete Lesson Plan	4	3	5
Lesson Plan Preparation--Complete Set Used and Supplemented With Other Materials	38	30	29
A Lesson Plan Preparation--Selected Modules Used as a Reference	28	17	24
Student Reference	12	7	9
Teacher Reference	24	16	21
Total*	106	73	88

*Some teachers indicated more than one use of the materials, thus totals exceed the number of teachers using individual course outlines.

TABLE 24

Grade Level With Which Modules Were Used by Teachers Included in Survey

Grade Level	Agricultural Supply	Horticulture	Agricultural Machinery
9th grade	3	12	3
10th grade	10	19	7
11th grade	28	26	35
12th grade	53	29	51
Total*	94	86	96

*Many teachers reported that materials were used with more than one grade, thus totals exceed the number of teachers using individual course outlines.

TABLE 25

Teachers Rating of the Ability of Classes With Which Modules Were Used

Ability	Agricultural Supply	Horticulture	Agriculture Machinery
Below average in ability	7	5	3
Average in ability	35	29	29
Above average in ability	3	0	3
Of mixed ability	20	15	21
No Response	-	1	-
Total	65	50	56

TABLE 26

Average Class Size With Which Modules Were Used

Class Size	Agricultural Supply	Horticulture	Agricultural Machinery
10 or less	31	11	27
11 - 15	13	12	14
16 - 20	14	18	13
Above 20	5	7	2
No Response	2	2	-
Total	65	50	56

TABLE 27

Teachers's Indication of Ideal Class Size for Off-Farm Agricultural Occupations Programs

Class Size	Agricultural Supply	Horticulture	Agricultural Machinery
10 or less	22	7	24
11 - 15	18	23	27
16 - 20	7	17	4
Above 20	1	0	0
No Response	17	3	1
Total	65	50	56

TABLE 28

Teacher Opinions Concerning Necessity of Work Experience In Addition to Classroom Experience in Off-Farm Agricultural Occupations Programs

Opinion	Agricultural Supply	Horticulture	Agricultural Machinery
Necessary	44	33	39
%	67.7	66.0	69.7
Not Necessary	17	15	16
%	26.2	30.0	28.6
No Reply	4	2	1
%	6.1	4.0	1.7
Totals	65	50	56
	100.0	100.0	100.0

TABLE 29

Enrollment and Placement Data on Students Enrolled In Courses in Off-Farm Agriculture

Item	Agricultural Supply	Horticulture	Agricultural Machinery
Students enrolled	472	873	450
%	100	100	100
Students completing course	471	642	398
%	99.9	73.5	88.4
Gainfully employed in area*	200	60	135
%	42.4	9.3	33.9

*In many instances students were still enrolled in high school at the time the survey was conducted. Percent placed obtained by dividing number gainfully placed by number completing course.

TABLE 30

Reaction of Teachers to the Agricultural Supply Modules Which They Used

Item	Not Appropriate (1)	(2)	Very Appropriate (3)	(4)	Total*
Major Teaching Objectives	0	6	32	19	57
Suggested Time Allotments	3	21	27	6	57
Suggested Introduction	2	9	35	10	56
Suggested Competencies	0	4	36	16	56
Subject Matter Content	0	3	36	19	58
Suggested Teaching-Learning Activities	1	12	32	14	59
Suggested Instructional and Reference Materials	0	10	28	19	57
Suggested Occupational Experiences	0	6	29	22	57
Totals	6	71	255	125	457

*Some teachers did not rate each item, thus the totals may be less than the total number of teachers using the materials.

TABLE 31

Reactions of Teachers to the Horticulture Modules Which They Used

Item	Not Appropriate		Very Appropriate		Total*
	(1)	(2)	(3)	(4)	
Major Teaching Objectives	1	3	24	17	45
Suggested Time Allotments	5	11	23	4	43
Suggested Introduction	1	6	23	13	43
Suggested Competencies	1	4	24	14	43
Suggested Material Content	0	2	26	16	44
Suggested Teaching-learning Activities	0	5	22	17	44
Suggested Instruction and Reference Material	0	5	26	15	46
Suggested Occupational Experience	0	6	20	16	42
Totals	8	42	188	112	350

*Some teachers did not rate each item, thus the totals may be less than the total number of teachers using the materials.

TABLE 32

Reaction of Teachers to Agricultural Machinery Modules Which They Used

Item	Not Appropriate (1)	(2)	Very Appropriate (3)	(4)	Total*
Major Objectives	0	4	33	15	52
Suggested Time Allotments	4	19	22	5	50
Suggested Introduction	1	7	32	10	50
Suggested Compentencies	0	5	32	13	50
Subject Matter Content	0	3	28	21	52
Suggested Teaching-Learning Activities	0	5	30	18	53
Suggested Instructional and Reference Material	0	4	25	24	53
Suggested Occupational Experiences	0	6	23	24	53
Totals	5	53	225	130	413

*Some teachers did not rate each item, thus the totals may be less than the total number of teachers using the material.

APPENDIX B

A Survey to Determine the Use of Center Materials in State Programs of Off-Farm Agricultural Occupations

1. Indicate the activities conducted in your state to provide agriculture teachers with information or training in improving instruction in Off-Farm Agricultural Occupations. (check all that apply)

___a. A special program during the state agriculture teachers conference
___b. District or area conferences
___c. Special conferences for teachers conducting pilot programs
___d. A summer school workshop (credit or non-credit)
___e. An educational TV program
___f. No activities were conducted for this purpose
___g. Other (specify) ____

2. According to our records, complimentary copies of Center materials on Off-Farm Agricultural Occupations were mailed to you in 1965-66. How did you use these materials? (check all that apply)

___a. Complimentary materials were kept on file for staff reference

b. Complimentary materials were reproduced (without editing) and distributed to:
    ___1. Selected teachers
    ___2. Interested teachers
    ___3. All teachers
    ___4. Were not distributed

c. Complimentary materials were edited (adapted to local conditions, local references inserted, etc.) and distributed to:
    ___1. Selected teachers
    ___2. Interested teachers
    ___3. All teachers
    ___4. Were not distributed

d. Please describe any other uses you made of the complimentary copies of the Center materials.

3. Additional Center materials were purchased with state or university funds and distributed to teachers. ___Yes ___No

4. If Center materials were distributed (either in original or edited form), the use of the materials was: (check all that apply)
    ___1. Explained at the state agriculture teachers conference
    ___2. Explained at district or area conferences
    ___3. Explained at special conferences on off-farm agricultural occupations
    ___4. Explained on educational TV programs
    ___5. Materials were not explained to teachers
    ___6. Other (specify) ____

5. How many teachers in your state are using the Center materials on Off-Farm Agricultural Occupations? _____

(Over)

6. Did you attend either the National Seminar on Off-Farm Agricultural Occupations (Ohio State University), or a Regional Seminar (New York, Pullman, Chicago, Denver, Atlanta) which were held in early summer, 1965? ____Yes ____No

If yes, do you feel that meetings of this mature are the most effective way of getting new information into the hands of state personnel? ____Yes ____No
Comments: ____
____

7. Indicate the use made of the Center materials in planning your state program of off-farm agricultural occupations. (check most appropriate)

a. Policy and Administrative Decisions in Introducing Vocational and Technical Education in Off-Farm Occupations
/_____/_____/_____/
great some little no

b. Summary of Research Findings in Off-Farm Agricultural Occupations
/_____/_____/_____/
great some little no

c. Planning and Conducting Cooperative Occupational Experience in Off-Farm Agriculture
/_____/_____/_____/
great some little no

d. Horticulture - Service Occupations (course outline and 12 modules)
/_____/_____/_____/
great some little no

e. Agricultural Supply - Sales and Service Occupations (course outline and 12 modules)
/_____/_____/_____/
great some little no

f. Agricultural Machinery - Service Occupations (course outline and 16 modules)
/_____/_____/_____/
great some little no

8. Did your state conduct a study of the opportunities for employment and the skills needed for job entry in Off-Farm Agricultural Occupations? ____Yes ____No

If yes, approximately when was the study initiated? ________________________
(Month) (Year)

Have you forwarded copies of the final report to the Educational Research Information Center, located at The Center for Vocational and Technical Education? ____Yes ____No

9. Please supply the names and addresses of the two top programs in Off-Farm Agricultural Occupations in your state.

1. Instructor ________________________
Address ________________________
____
Name of Program ________________________
____

2. Instructor ________________________
Address ________________________
____
Name of Program ________________________
____

10. Please make any suggestions which you feel would improve future programs of this nature.

Date________________ Signature ________________________________

APPENDIX C

The Center for Research and Leadership Development
in Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

Evaluation of Selected Off-Farm Agricultural Occupation Course Materials and Lesson Outlines

1. The Center for Vocational and Technical Education has developed a series of eight publications designed to aid in the initiation and development of off-farm agricultural occupations courses. Did you use any of the Center materials in your off-farm agricultural occupations course?

___YES → CONTINUE WITH QUESTION 2

___NO → GO ON TO QUESTION 3

2. CHECK below those publications which were available in your department. Also, RATE the publications which you used as to their value in initiating and developing your program in off-farm agricultural occupations.

Available	Not Available	Title or Description of Center Materials in Off-Farm Agricultural Occupations	Value of Center Publications			
			Very Much	Much	Little	No
☐	☐	1. Policy and Administrative Decisions in Introducing Vocational and Technical Education in Agriculture for Off-Farm Occupations	☐	☐	☐	☐
☐	☐	2. Vocational and Technical Education in Agriculture for Off-Farm Occupations	☐	☐	☐	☐
☐	☐	3. Summary of Research Findings in Off-Farm Agricultural Occupations	☐	☐	☐	☐
☐	☐	4. Planning and Conducting Cooperative Occupational Experience in Off-Farm Agriculture	☐	☐	☐	☐
☐	☐	5. Occupational Guidance for Off-Farm Agriculture	☐	☐	☐	☐
☐	☐	6. Horticulture - Service Occupations (course outline and twelve modules)	☐	☐	☐	☐
☐	☐	7. Agricultural Supply - Sales and Service Occupations (course outline and twelve modules)	☐	☐	☐	☐
☐	☐	8. Agricultural Machinery - Service Occupations (course outline and sixteen modules)	☐	☐	☐	☐

(Over)

3. List the key factor(s) which influenced you to initiate a program in off-farm agricultural occupations. (e.g., community survey, district supervisor)
Apparent need for this type of program

4. Indicate the source which first made you aware of the development of the Center materials on off-farm agricultural occupations (check one and give name where appropriate).

___a. National Seminar on Off-Farm Agricultural Occupations (The Ohio State University), conducted in early summer, 1965
___b. Regional Seminar on Off-Farm Agricultural Occupations conducted in early summer, 1965, at:
    ___New York ___Denver
    ___Chicago ___Pullman ___Atlanta

___c. State Supervisor (name) ______________________________
___d. District or Area Supervisor (name) ______________________________
___e. Teacher Educator (name) ______________________________
___f. School Administrator (name) ______________________________
___g. Agriculture Teacher (name) ______________________________
___h. Agricultural Education Magazine ______________________________
___i. Other (specify) ______________________________

5. If you did not use the Center materials which you purchased, please indicate the reasons which brought about this decision. (Indicate with a check in the appropriate square.)

☐ 1. Materials were not adaptable to my situation.

☐ 2. Materials were too complicated to be used.

☐ 3. Lacked enough time to adapt materials to my program.

☐ 4. Decided not to offer off-farm agricultural occupations course.

☐ 5. Other (specify) ______________________________
____

6. Name of School ______________________________ Address ______________________________

7. The school enrollment is (Grades 9-12) ______________

8. Attendance area of school is primarily (check one):
___Rural - Students live in country area (farm or non-farm)
___Urban - Students live within city limits
___If urban, please give approximate population of city: _____

9. Instructor's Name ______________________________ Date ______________

FOR THE REMAINDER OF THIS EVALUATION, COMPLETE ONLY THOSE PAGES WHICH CORRESPOND TO THE COURSE OUTLINE THAT YOU HAVE USED.

Agricultural Supply	-- Green Page
Agricultural Machinery	-- Pink Page
Ornamental Horticulture	-- Blue Page

INSTRUCTION: If you have used the Agricultural Supply materials, complete this questionnaire.

AGRICULTURAL SUPPLY EVALUATION FORM

1. Check below the modules used in your course
    ___1. Career Opportunities in Agricultural Sales and Service
    ___2. Orientation to the Supervised Occupational Experience Program
    ___3. Human Relations in Agricultural Occupations
    ___4. Agricultural Salesmanship
    ___5. Organizations and Functions of Agricultural Businesses
    ___6. Business Procedures
    ___7. Feed - Sales and Service
    ___8. Crop, Lawn, and Garden Seeds - Sales and Service
    ___9. Fertilizers - Sales and Service
    ___10. Agricultural Chemicals - Sales and Service
    ___11. Petroleum and Petroleum Products - Sales and Service
    ___12. Miscellaneous Agricultural Supplies and Small Equipment - Sales and Service

2. What was the primary use made of the modules? (CHECK ONE)
    ___Modules were used as a complete lesson plan.
    ___Modules were used and supplemented with other material in preparing lesson plans.
    ___Selected modules were used as a reference in preparing lesson plans.
    ___Modules were used for student reference.
    ___Modules were used for teacher reference.
    ___Other use - Specify ______________________________

3. Please provide the following general information about the class in which the preceding modules were used. (Check the most appropriate blank.)
    a. Modules were used with:
        ___9th grade
        ___10th grade
        ___11th grade
        ___12th grade
        ___13th year (post high school)
        ___14th year (post high school)
        ___Other (Specify) ______________________________

    b. Students enrolled were:
        ___below average in ability
        ___average in ability
        ___above average in ability
        ___of mixed ability

    c. Average class size was:
        ___10 or less
        ___11 - 15
        ___16 - 20
        ___above 20

    d. What do you consider the ideal class size for courses of this nature? ______

    e. Do you consider work experience as necessary for the modules you used?
        ___Yes ___No

4. If the instructional course has been completed, how many students were initially enrolled? ____ How many students completed the course? ____ How many students are gainfully employed in the area in which they were prepared? ____

5. Respond to the following items by circling the number which indicates your reaction to the modules you used. Scale numbers are 1 - 4, with 1 representing not appropriate and 4 as very appropriate.

	Not Appropriate		Very Appropriate	
A. Major teaching objectives	1	2	3	4
B. Suggested time allotments	1	2	3	4
C. Suggested introductions	1	2	3	4
D. Suggested competencies	1	2	3	4
E. Subject matter content	1	2	3	4
F. Suggested teaching-learning activities . . .	1	2	3	4
G. Suggested instructional and reference material	1	2	3	4
H. Suggested occupational experiences	1	2	3	4

6. If you have suggestions to offer (either positive or negative) about the preceding items, please use the remaining space for these suggestions. Please identify the item to which you are referring.

7. Would you be willing to be considered as a consultant for future Center efforts in the area of curriculum materials? ____Yes ____No

INSTRUCTION: If you used the Agricultural Machinery materials,
complete this questionnaire.

AGRICULTURAL MACHINERY EVALUATION FORM

1. Check below the modules used in your course.

___ 1. Organization and Management of Agricultural Machinery Dealerships
___ 2. Agricultural Machinery Service Department Operating Procedures
___ 3. Agricultural Machinery Parts Department Operating Procedures
___ 4. Agricultural Salesmanship
___ 5. Human Relations in Agricultural Occupations
___ 6. Metal Fusion and Fabrication Welding
___ 7. Agricultural Machinery Assembly and Lubrication
___ 8. Mechanical Power Transfer Systems
___ 9. Hydraulic Power Transfer Systems
___ 10. Adjustment, Maintenance, and Repair of Tillage, Planting, Spraying, and Fertilizing Machinery
___ 11. Adjustment, Maintenance, and Repair of Crop Harvesting Machinery
___ 12. Adjustment, Maintenance, and Repair of Small Gasoline Engines
___ 13. Tractor Tune-up and Maintenance
___ 14. Gasoline Tractor Engine Systems
___ 15. Diesel Engine Systems
___ 16. Tractor Repair

2. What was the primary use made of the modules? (CHECK ONE)

___ Modules were used as a complete lesson plan.
___ Modules were used and supplemented with other material in preparing lesson plans.
___ Selected modules were used as a reference in preparing lesson plans.
___ Modules were used for student reference.
___ Modules were used for teacher reference.
___ Other use - Specify ________________________________

3. Please provide the following general information about the class in which the preceding modules were used. (Check the most appropriate blank.)

a. Modules were used with:

___ 9th grade
___ 10th grade
___ 11th grade
___ 12th grade
___ 13th year (post high school)
___ 14th year (post high school)
___ Other (Specify) ________________________________

b. Students enrolled were:

___ below average in ability
___ average in ability
___ above average in ability
___ of mixed ability

c. Average class size was:

___ 10 or less
___ 11 - 15
___ 16 - 20
___ above 20

d. What do you consider the ideal class size for courses of this nature? _____

e. Do you consider work experience as necessary for the modules you used?
_____Yes _____No

4. If the instructional course has been completed, how many students were initially enrolled? _____ How many students completed the course? _____ How many students are gainfully employed in the area in which they were prepared? _____

5. Respond to the following items by circling the number which indicates your reaction to the modules you used. Scale numbers are 1 - 4, with 1 representing not appropriate and 4 as very appropriate.

	Not Appropriate		Very Appropriate	
A. Major teaching objectives	1	2	3	4
B. Suggested time allotments	1	2	3	4
C. Suggested introductions	1	2	3	4
D. Suggested competencies	1	2	3	4
E. Subject matter content	1	2	3	4
F. Suggested teaching-learning activities . . .	1	2	3	4
G. Suggested instructional and reference material	1	2	3	4
H. Suggested occupational experiences	1	2	3	4

6. If you have suggestions to offer (either positive or negative) about the preceding items, please use the remaining space for these suggestions. Please identify the item to which you are referring.

7. Would you be willing to be considered as a consultant for future Center efforts in the area of curriculum materials? _____Yes _____No

INSTRUCTION: If you used the Horticultural materials, complete this questionnaire.

HORTICULTURE EVALUATION FORM

1. Check below the modules used in your course.
   - ___1. Exploring Occupational Opportunities in Ornamental Horticulture
   - ___2. Identifying Horticultural Plants
   - ___3. Propagating Horticultural Plants
   - ___4. Growing Horticultural Plants
   - ___5. Using Soil and Other Plant Growing Media Effectively
   - ___6. Recognizing and Controlling Plant Pests
   - ___7. Constructing, Maintaining, and Using Plant Growing Structures
   - ___8. Agricultural Salesmanship
   - ___9. Establishing and Caring for Lawns and Turf
   - ___10. Operating, Repairing, and Maintaining Small Power Equipment
   - ___11. Using and Caring for Ornamental Plant Materials and Landscape Structures
   - ___12. Human Relations in Agricultural Occupations

2. What was the primary use made of the modules? (CHECK ONE)
   - ___Modules were used as a complete lesson plan.
   - ___Modules were used and supplemented with other material in preparing lesson plans.
   - ___Selected modules were used as a reference in preparing lesson plans.
   - ___Modules were used for student reference.
   - ___Modules were used for teacher reference.
   - ___Other use - Specify ________________________________

3. Please provide the following general information about the class in which the preceding modules were used. (Check the most appropriate blank.)
   a. Modules were used with:
      - ___9th grade
      - ___10th grade
      - ___11th grade
      - ___12th grade
      - ___13th year (post high school)
      - ___14th year (post high school)
      - ___Other (Specify) ________________________________

   b. Students enrolled were:
      - ___below average in ability
      - ___average in ability
      - ___above average in ability
      - ___of mixed ability

   c. Average class size was:
      - ___10 or less
      - ___11 - 15
      - ___16 - 20
      - ___above 20

   d. What do you consider the ideal class size for courses of this nature? ____

   e. Do you consider work experience as necessary for the modules you used?
      ____Yes ____No

(Over)

4. If the instructional course has been completed, how many students were initially enrolled? _____ How many students completed the course? _____ How many students are gainfully employed in the area in which they were prepared? _____

5. Respond to the following items by circling the number which indicates your reaction to the modules you used. Scale numbers are 1 - 4, with 1 representing not appropriate and 4 as very appropriate.

	Not Appropriate		Very Appropriate	
A. Major teaching objectives	1	2	3	4
B. Suggested time allotments	1	2	3	4
C. Suggested introductions	1	2	3	4
D. Suggested competencies	1	2	3	4
E. Subject matter content	1	2	3	4
F. Suggested teaching-learning activities	1	2	3	4
G. Suggested instructional and reference material	1	2	3	4
H. Suggested occupational experiences	1	2	3	4

6. If you have suggestions to offer (either positive or negative) about the preceding items, please use the remaining space for these suggestions. Please identify the item to which you are referring.

7. Would you be willing to be considered as a consultant for future Center efforts in the area of curriculum materials? _____Yes _____No

Publications of
The Center for Vocational and Technical Education

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3	Research and Development Priorities in Technical Education. May, 1967. 34 p.	*
4	Review and Synthesis of Research in Agricultural Education. August, 1966. 140 p.	1.50
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